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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/644,422	WASSERMAN ET AL.
	Examiner	Art Unit	
	JESSICA L. LEMIEUX	3693	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 October 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4,8,11,13-19,23,26-34,38,41 and 43-45* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-4, 8, 11, 13-19, 23, 26-34, 38, 41, and 43-45* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some * c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

DETAILED ACTION

1.   This Non-Final Office action is in response to the application filed on August 20th,

2003 and in response to the applicant's arguments/amendments filed on October 10th,

2008. Claims 1-4, 8, 11, 13-19, 23, 26-34, 38, 41 and 43-45 are pending.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action

has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October

10th, 2008 has been entered.

Response to Arguments

3.   Applicant argues that Johnson does not specifically teach "a selector function

that uses selection criteria specified by rules to select accounts, forecast amounts, and

attrition and propensity rates from a database," "rules used by a selector function for

accessing a database," "selection of attrition rates or propensity rates from a database,"

or "calculation of FV or the subsequent calculation of LTV." Examiner would first like to

point out that Johnson was not relied upon for the calculation of LTV. In response to

applicant's arguments against the references individually, one cannot show

nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA

1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Examiner notes that as Applicant has stated Johnson "describe[s] retrieving individual asset data from a database based on a given criteria, performing an NPV calculation." The act of "retrieving data" based on "given criteria" is in it of itself selection criteria. The rules by which this data is retrieved can be anything such as a rule to only access the required information instead of always retrieving everything and anything possible in the database. Examiner asserts that there must be some set of rules/guidelines to select information, otherwise the correct/required information wouldn't be accessed. Examiner further asserts that Johnson does teach retrieving rates (attrition rates etc). Applicant's specification conceptually defines attrition rates as "the rate at which a cash flow will be decreased" (page 8, lines 25-26). Johnson teaches a discount factor (column 9, lines 3-26), which would have inherently needed to be accessed from a database to use in the determination of NPV. One skilled in the art at the time of the invention was made would understand that a discount factor is a rate used to discount or decrease future cash flows to obtain a net present value. Therefore it would have been obvious to one skilled in the art at the time of invention that Johnson does disclose "a selector function that uses selection criteria specified by rules to select accounts, amounts and attrition and propensity rates from a database."

Applicant states that the prior art "do[es] not refer to the calculation of FV." Examiner notes that the equation in the Johnson reference is a Future Value (C_1) equation solving for Net Present Value (NPV). It would have been obvious to one skilled in the art at the time the invention was made that this equation could easily be manipulated to solve for Future Value or any of the other variables in the equation.

Therefore it would have been obvious to one skilled in the art at the time of invention

that Johnson does disclose "the calculation of FV."

4.   Applicant argues that Sulkowski does not specifically teach "a selector function

that uses selection criteria specified by rules to select the accounts, forecast amounts,

and attrition and propensity rates from the database," or "performing NPV and FV

calculations on selected accounts using selected forecast amounts, and attrition and

propensity rates, wherein results from the NPV and FV calculations are integrated to

proved an LTV." Examiner would first like to point out that Sulkowski was not relied

upon for a selector function that uses selection criteria specified by rules to select the

accounts, forecast amounts, and attrition and propensity rates from the database, or

performing NPV and FV calculations on selected accounts using selected forecast

amounts, and attrition and propensity rates". In response to applicant's arguments

against the references individually, one cannot show nonobviousness by attacking

references individually where the rejections are based on combinations of references.

See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800

F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant admits that Sulkowski teaches the calculation of a NPV for each

account. As was explained above, NPV is determined by using FV and vice versa.

Sulkowski further states that "the lifetime-value is thus risk-base, in that it takes the

past, current and future charge-off risk of an account into consideration." The reference

goes on to clarify that it "generates a net present value for each account in one or more

future periods... [utilizing] an adjusted cash flow discount rate, and the number of

periods into the future for which to calculate forecasted Lifetime-value" (paragraphs

[0066-0067]). Examiner notes that a net present value in multiple future periods utilizing

discount rates would be a future value (FV). Sulkowski further states that "the lifetime-

value (LTV) is then the sum of discounted cash flows for each account" (paragraph

[0069 and 0077]). Therefore it would have been obvious to one skilled in the art at the

time of invention that Johnson does disclose results from the NPV and FV calculations

being integrated to provide an LTV.

5.   Applicant argues that Atkins "forecast amounts" are not used in the same context

of Applicant's claims "namely the calculation of Net Present Value (NPV) and Future

Value (FV) where the results of those calculations are integrated to provide a Life-Time

Value (LTV). Applicant admits that Atkins describes a financial program utilizing the

analysis and reporting of investments that takes into account forecast amounts. Atkins

was relied up on to teach that forecast amounts are used as a type of selected amount

found in a database to select in order to determine values and rates regarding the asset

utilizing the time value money equations. In response to applicant's arguments against

the references individually, one cannot show nonobviousness by attacking references

individually where the rejections are based on combinations of references. See *In re*

Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.,* 800 F.2d 1091,

231 USPQ 375 (Fed. Cir. 1986).

6.   Applicant states that Choy "says nothing about selection criteria being grouped in

order to combine them in dynamically generated SQL statements, or that such grouped

selection criteria are processed independently and in parallel to yield output tables

comprising accounts, forecast amounts, and attrition and propensity rates selected from

the database for use in both Net Present Value (NPV) and Future Value (FV)

calculations that are integrated to provide a Life-Time Value (LTV)." Examiner notes

that these arguments are made with respect to the amended claim language.

Applicant's arguments have been considered but are moot in view of the new ground(s)

of rejection.

7.   Applicant states that Foran "says nothing about processing selection criteria

independently and in parallel and processing of queries or SL statements having

selection criteria." Examiner notes that these arguments are made with respect to the

amended claim language. Applicant's arguments have been considered but are moot in

view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

8.   Claims 1-4, 8, 11, and 13-15 are rejected under 35 U.S.C. 101 because the

claims must be (1) tied to another statutory class (such as a particular apparatus) or (2)

transform underlying subject matter (such as an article or materials) to a different state

or thing. If neither of these requirements is met by the claim, the method is not a patent

eligible process under § 101 and should be rejected as being directed to non-statutory

subject matter. Merely having "another statutory class" in the preamble and not in the

body of the claim is also not sufficient to render the claim statutory.

An example of a method claim that would not qualify as a statutory process would be a claim that recited purely mental steps. Thus, to qualify as a § 101 statutory process, the claim should positively recite the other statutory class (the thing or product) to which it is tied, for example by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, for example by identifying the material that is being changed to a different state.

Claim Objections

9.   Claim 27 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 27 recites "the selector function generates statements that are executed by a database management system to perform the selection of the accounts, amounts and rates." Independent claim 16 invariably recites the same limitation.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10.   Claims 1-4, 8, 16-19, 23, 27, 31-34, and 38 are rejected under 35 U.S. C. 103(a) as being unpatentable over US Patent Number 7,082,411 to Johnson et al (hereinafter

Johnson) in view of US Patent Number 5,852,811 to Atkins (hereinafter Atkins) in view

of US Patent Application Number US2004/0039688 to Sulkowski et al (hereinafter

Sulkowski) further in view of US Patent Number 7,249,138 to Wasserman (hereinafter

Wasserman) and US Patent Number 5,963,939 to McCann et al. (hereinafter McCann).

As per claims 1, 16 and 31
Johnson discloses selecting accounts, amounts and attrition (discount factor) (column 9, lines 3-11) and propensity (risk) (column 9, lines 20-22 & column 16, lines 49-51) rates (asset data) from a database through a selector function, wherein the selector function uses selection criteria specified by rules to select the accounts, amounts and, and attrition and propensity rates from the database (column 4, lines 10-19) and performing one or more Net Present Value (NPV) (column 9, lines 3-26) and Future Value (FV) (C_1, expected payoff) calculations on the selected accounts using the selected amounts and rates (column 9, lines 3-26 & 58-60). Examiner notes that applicant's specification conceptually defines attrition rates as "the rate at which a cash flow will be decreased" (page 8, lines 25-26). Johnson teaches a discount factor. One skilled in the art at the time the invention was made would understand that a discount factor is a rate used to discount or decrease future cash flow.
Johnson does not specifically teach the amounts comprise forecast amounts.
Atkins discloses the amounts comprise forecast amounts.
Therefore it would have been obvious to one skilled in the art at the time the invention was made that the amounts comprise forecast amounts as taught by Atkins as a type of selected amount found in a database to select in order to determine values and rates regarding the asset utilizing the time value money equations.
Johnson does not specifically teach results from the NPV and FV calculations are integrated to provide a Life-Time Value (LTV) of one or more customers.
Sulkowski teaches results from the NPV and FV calculations are integrated to provide a Life-Time Value (LTV) of one or more customers (paragraphs [0009-0010, 0027, 0066-0077 and 0104-0112).
Therefore it would have been obvious to one skilled in the art at the time the invention was made that results from the NPV and FV calculations are integrated to provide a Life-Time Value (LTV) of one or more customers as taught by Sulkowski to accurately evaluate future profitability of assets by taking into account present and future values.
Johnson discloses the selector function generates statements (criteria... for use in valuating other asset data) that are executed by a database management system to perform the selection of the accounts, amounts and attrition and propensity rates selected from the database (column 4, lines 10-19). Johnson does not specifically teach dynamically generating Structured Query Language (SQL) statements using the selection criteria, the selection criteria are grouped in order to combine them in the

dynamically generated SQL statements, and the grouped selection criteria are processed independently and in parallel to yield output tables.

Wasserman and McCann teach dynamically generating Structured Query Language (SQL) statements using the selection criteria, the selection criteria are grouped in order to combine them in the dynamically generated SQL statements, and the grouped selection criteria are processed independently and in parallel to yield output tables (Wasserman: column 11, lines 37-55 and claim 1 and McCann: column 69, lines 15-41).

Therefore it would have been obvious to one skilled in the art at the time of invention to modify the financial processing system of Johnson, Atkins and Sulkowski to include dynamically generating Structured Query Language (SQL) statements using the selection criteria, the selection criteria are grouped in order to combine them in the dynamically generated SQL statements, and the grouped selection criteria are processed independently and in parallel to yield output tables as taught by both Wasserman and McCann to allow a user to fully utilize the output to determine relationships between information as well as process similar selections together concurrently so that fewer passes need to be made through the tables in the relational database.

As per claims 2, 17 and 32
Johnson discloses the NPV is a net present profitability value (column 9, lines 1-2).

As per claims 3, 18 and 33
Johnson discloses the FV (C_1) is a possible future profitability value (expected payoff) (column 9, lines 3-10).

As per claims 4, 19 and 34
Johnson discloses the selected accounts contain current profitability values of accounts for the customers (current appraisal amount) (column 18, lines 8-20). Examiner notes that C_o is the investment at time 0 and therefore it would have been obvious to one skilled in the art at the time the invention was made that a current profitability value would be the value at the present time, time 0.

As per claims 8, 23 and 38
Johnson discloses the NPV and FV calculations are based on the rules (column 4, lines 10-19 & column 9, lines 3-26 & 58-60).

As per claim 27
Johnson discloses the selector function generates statements (criteria... for use in valuating other asset data) that are executed by a database management system to perform the selection of the accounts, amounts and rates (column 4, lines 10-19).

11.   Claims 13, 28 and 43 are rejected under 35 U.S. C. 103(a) as being

unpatentable over US Patent Number 7,082,411 to Johnson et al (hereinafter Johnson)

in view of US Patent Number 5,852,811 to Atkins (hereinafter Atkins) in view of US

Patent Application Number US2004/0039688 to Sulkowski et al (hereinafter Sulkowski)

further in view of US Patent Number 7,249,138 to Wasserman (hereinafter Wasserman)

and US Patent Number 5,963,939 to McCann et al. (hereinafter McCann) further in view

of US Patent Number 6,405,189 to Gillis (hereinafter Gillis).

> As per claims 13, 28 and 43
> Johnson does not specifically teach the statements are generated from one or
> more object-oriented parameterized templates.
> Gillis teaches the statements are generated from one or more object-oriented
> parameterized templates (abstract & column 2, lines 6-22).
> Therefore it would have been obvious to one skilled in the art at the time the
> invention was made that the statements are generated from one or more object-oriented
> parameterized templates as taught by Gillis to ensure a consistent process pertaining to
> each particular asset with respect to the selection of information.

12.   Claims 15, 30 and 45 are rejected under 35 U.S. C. 103(a) as being

unpatentable over US Patent Number 7,082,411 to Johnson et al (hereinafter Johnson)

in view of US Patent Number 5,852,811 to Atkins (hereinafter Atkins) in view of US

Patent Application Number US2004/0039688 to Sulkowski et al (hereinafter Sulkowski)

further in view of US Patent Number 7,249,138 to Wasserman (hereinafter Wasserman)

and US Patent Number 5,963,939 to McCann et al. (hereinafter McCann) in view of US

Patent Number 6,405,189 to Gillis (hereinafter Gillis) further in view of US Patent

Number 6,625,624 to Chen et al. (hereinafter Chen).

> As per claims 15, 30 and 45
> Johnson does not specifically teach the statements include one or more macros.
> Gillis teaches the statements include plain text (column 2, lines 14-16). Gillis
> however does not specifically teach one or more macros.

Chen teaches plain text contains macro (column 5, lines 49-50).
Therefore it would have been obvious to one skilled in the art at the time the invention was made that the statement include one or more macros as taught by Gillis and Chen to enable the statements to be executable.

13.   Claims 11, 14, 26, 29, 41 and 44 are rejected under 35 U.S. C. 103(a) as being

unpatentable over US in view of US Patent Number 5,852,811 to Atkins (hereinafter

Atkins) in view of US Patent Application Number US2004/0039688 to Sulkowski et al

(hereinafter Sulkowski) further in view of US Patent Number 7,249,138 to Wasserman

(hereinafter Wasserman) and US Patent Number 5,963,939 to McCann et al.

(hereinafter McCann) in view of US Patent Number 5,551,027 to Choy et al (hereinafter

Choy).

As per claims 11, 26 and 41
Johnson does not specifically teach the grouped selection criteria comprise similar selection criteria.
Choy teaches teach the grouped selection criteria comprise similar selection criteria (column 2, lines 26-29 & 36-43).
Therefore it would have been obvious to one skilled in the art at the time the invention was made that teach the grouped selection criteria comprise similar selection criteria as taught by Choy to improve efficiency in selecting the same criteria.

As per claims 14, 29 and 44
Johnson does not specifically teach the statements are optimized so that the statements are executed in parallel by the database management system.
Choy teaches the statements are optimized so that the statements are executed in parallel by the database management system (column 7, lines 12-34 & column 25, lines 24-54).
Therefore it would have been obvious to one skilled in the art at the time the invention was made that the statements are optimized so that the statements are executed in parallel by the database management system as taught by Choy in order to process similar selections together concurrently so that fewer passes need to be made through the tables in the relational database.

Conclusion

14.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to JESSICA L. LEMIEUX whose telephone number is

(571)270-3445. The examiner can normally be reached on Monday-Thursday 8AM-

5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, James Kramer can be reached on 571-272-6783. The fax phone number

for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jessica L Lemieux
Examiner
Art Unit 3693

/J. L. L./
Examiner, Art Unit 3693
January 2009

/Stefanos Karmis/
Primary Examiner, Art Unit 3693